

REMARKS

The present filing is responsive to the Office Action.

Summary of the Response

Claims 1, 3, 4, 9, 14, 15 and 19 have been amended. Claims 2, 13 and 20 have been deleted. Claims 1, 3-12 and 14-19 remain pending in this application. Reexamination and reconsideration of the present application as amended are respectfully requested.

The Invention

One aspect of the present invention is directed to a backlight device that uses one light guide with edge light source to provide lighting to main lighting region (e.g., backlighting an LCD with a larger screen size) and a sub-lighting region (e.g., backlighting an LCD with a smaller screen size). Given the different sizes of lighting regions, the light source is controlled in accordance with illumination mode for the main lighting region and illumination for the sub-lighting region, so that more light is provided to light the larger main lighting region and less light is provided to light the smaller sub-lighting region. In the disclosed embodiment, the controller selects the illumination mode and switches the power to the light source accordingly. For example, the light source is controlled to emit a smaller amount of light needed to illuminate the smaller display panel, and a larger amount of light needed to illuminate the larger display panel.

Applicant notes that for applications in LCD displays, the controller controls switching the light source depending on the illumination modes between the main lighting region and the

sub-lighting region. This switching control is different from switching of the LCD panels between displaying at the main lighting region and the sub-lighting region. It is noted that LCD displays make use of backlighting, and the control of liquid crystals as light filters to pass or block backlight in accordance with image data. Accordingly, for example in a flip type cell phone having a smaller exterior display and a larger interior display on both sides of the flip cover of the cell phone, the lighting of the larger and smaller displays is controlled by the switching of the light source. However, the “turning” on and off of the displays is by a different control for the LC panels.

Claim Rejections Under 35 USC 102

Claims 1-3, 8, 9 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Yuichi (JP 2002-372711). This rejection is respectfully traversed.

Claim 1 has been amended to incorporate all the limitations of claim 2. Claims 3 and 4 have been amended to depend upon claim 1 as amended, instead of upon claim 2 (now canceled). These amendments after final action are appropriate and should be entered, as they do not introduce new issues. Given the incorporation of claim 2 into claim 1 and the cancellation of claim 2, the rejection of claim 2 would be discussed in reference to claim 1 below.

Claim 1 as amended (i.e., previously presented claim 2) recites control means for controlling said light source for illuminating a main lighting region ..., and illuminating a sub-lighting region ..., wherein said controlling means comprises mode select means for selecting either a mode of illuminating the main lighting region or a mode of illuminating the sub-lighting region; and switch means for switching the power supply to said light source according to the mode selected by said mode select means. Yuichi does not disclose control of light source in

accordance with illumination mode for main lighting region or illumination mode for sub-light region, by mode selection and switching of the power supply to the light source.

With respect to the rejection of claim 2 (now claim 1 as amended), the Examiner referred to [0005] in Yuichi to find correspondence to the recited control means, including the mode selection means and switching means for the light source. However, the referenced section in Yuichi is silent on the control of the light source. According to the automated translated version of Yuichi made available at the Japanese Patent Office website, section [0005] states:

“As the electronic equipment 100 which has the liquid crystal display panels 108 and 109 in such a rear surface, the foldaway cellular phone 100 which can receive an E-mail is known, for example (refer to drawing 12). There are some which have the sub display panel 109 which tells reception of the main display panel 108 which is an original display screen, and mail in this cellular phone 100 (refer to drawing 12 (a) and (b)). By the folded state, since the main liquid crystal display panel 108 is closed, this cellular phone 100 is arranged so that the sub liquid crystal display panel 109 may be installed in the rear-face 117 side of the case 101 and can be seen from the outside also by a folded state (refer to drawing 10 (b)).”

Nowhere in the above referenced section in Yuichi contains any teach of the **control of the light source in accordance with the display mode**. The Examiner referred item 108 in Yuichi to correspond to the recited control means, but item 108 is specifically identified as a liquid crystal panel, in particular the top liquid crystal panel. Further, as noted above, Yuichi control of the main display panel 108 and sub display 109 in Yuichi would be different from the recited control of the light source in claim 1 as amended. Accordingly, the Examiner failed to establish a prima facie case of anticipation of claim 1 as amended (i.e., previously presented claim 2) by Yuichi. Claim 1 as amended and all its dependent claims are therefore patentable over Yuichi.

Further, the dependent claims add further limitations to claim 1 to further distinguish from Yuichi. For example, with respect to dependent claim 3, the switch means supplies the **whole** light source with the electric power in one mode of illumination, and supplies **part** of the light source with the electric power in another mode of illumination. Other than the Examiner merely quoting in verbatim the claimed recitations, the Examiner has not identified any corresponding structures disclosed in Yuichi which are deemed to correspond to the recited structures in the claims. For example, the Examiner did not identify which structure in Yuichi corresponds to the recited switch means supplying electric power to **whole** light source and **part** of the light source depending on the illumination modes for main and sub-lighting regions.

Similarly, with respect to independent claims 9 and 19, the Examiner has not pointed out where in Yuichi is the disclosure of **overlapping** lighting regions.

Given that the Examiner has the burden of establishing a prima facie case of anticipation (and obviousness for that matter), Applicant respectfully requests the Examiner to point out specific sections in the reference which are alleged to contain the anticipatory disclosures, so that Applicant can fully address the Examiner's specific allegations. Any lack of specificity in Yuichi should be resolved in Applicant's favor.

Claim Rejections Under 35 USC 103

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yuichi (JP 2002-372711) in view of Im et al. (US 2006/0274226). Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yuichi (JP 2002-372711) in view of Im et al. (US 2006/0274226) in view of West et al. (US 2005/0001537). Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yuichi (JP 2002-372711) in view of Hosseini et al. (US 2001/0001595).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yuichi (JP 2002-372711) in view of Higashiyama (US 7,156,546). Claims 9-11, 13, 14, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kochu (JP 2001-067049) in view of Nagakubo et al. (US 2004/0100423). Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kochu (JP 2001-067049) and of Nagakubo et al. (US 2004/0100423) in view of Ishikawa et al. (US 6,396,634). Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kochu (JP 2001-067049) and of Nagakubo et al. (US 2004/0100423) in view of Im et al. (US 2006/0274226). These rejections are respectfully traversed.

Given the traversal of independent claim 1 as amended, the obviousness rejection of the dependent claims based on Yuichi in view of secondary references is rendered moot. Further, none of the secondary references make up for the deficiencies of Yuichi.

With respect to the rejection of independent claims 9 and 19 based on Kochu in view of Nagakubo, claims 9 and 19 have been amended to incorporate all the limitations of claims 13 and 20, respectively. Claims 14 and 15 have been amended to depend upon claim 9 as amended, instead of upon claim 13 (now canceled). These amendments after final action are appropriate and should be entered, as they do not introduce new issues. Given the incorporation of claims 13 and 20 into respective claims 9 and 19, and the cancellation of claims 13 and 20, the rejection of claims 13 and 20 would be discussed below in reference to claims 9 and 19 as amended.

For similar reasons with respect to claim 1, Kochu, like Yuichi, is likewise deficient in its disclosure of the recited controller that controls light source depending on the illumination of the first or second display. Kochu is completely silent on the control of the light source for different illumination of first and second display. In fact, Kochu did not even bother to show a light source in its drawings. Kochu is directed to a display configuration that is at most similar to the

prior art configuration discussed in reference to Fig. 1 in the present application. Applicant respectfully requests the Examiner to show where in Kochu is the disclosure of the recited controller controlling different amount of light from the light source to be emitted into the light guide, wherein the amount depends on whether light is desired to be emitted through the light guide to illuminate the first display or the second display, as required by claims 9 and 19 as amended (previously claims 13 and 20).

Applicant further notes that even if Kochu discloses controlling and/or switch its liquid crystal display panels, it is silent on the control of the light source to emit different amount to depending on whether to illuminate the first or second displays.

None of the secondary references make up for the deficiencies of primary reference Kochu.

Applicant reiterates that it appears that in setting forth the basis for claim rejection, the Examiner merely quoted in verbatim the claim recitations, without identifying all the corresponding structures disclosed in Yuichi which are deemed to correspond to the recited structures in the claims. In the case of previously presented claims 13 and 20, it is interesting to note that the Examiner actually misquoted the claim recitations. On page 9 of the office action, regarding claims 13 and 20, the Examiner stated: “In addition to Kin Kochu and Nagakubo et al as disclosed above, Kin Kochu (Drawing 5) discloses wherein said controlling means (100) comprises mode select means for selecting either a mode of illuminating the main lighting region (200) or a mode of illuminating the sub-lighting region (300); and switch means ([0029] and [0065] and drawing 7) for switching the power supply to said light source according to the mode selected by said mode select means.” Applicant does not understand how and why the Examiner read into claims 13 and 20 the limitation of “controlling means”, “mode select means” and

“switch means”. It is clear that the Examiner failed to appreciate the claim limitations and the teachings of the cited references.

Applicant also notes that the Examiner appeared to have considered each additional limitation introduced by each dependent claim in the abstract, without considering the base claim and applicable intervening claims, and the interaction of the various recited limitations. For example, with respect to claim 5, the Examiner indicated that West discloses at page 5, claim 13: “wherein said LEDs having higher contribution to the illumination are center-located LEDs ..., therefore to provide a uniform distribution of light.” (See page 5 of the office action.) The Examiner failed to consider claim 5 in connection with claim 1 and intervening claims 2 and 4. The Examiner failed to recognize the recited structural interactions when considered as a whole, which require that the switch means supplies electric power to center-located LEDs having higher contribution to the illumination in the mode of illuminating the sub-lighting region, as required by claim 4. That is, the region outside of the sub-lighting region does not need to be lit by LEDs. This is different from West, in which its center located colored LEDs are brighter than the LEDs at the ends of the rows to improve color distribution, **not uniform light distribution** as the Examiner alleged.

CONCLUSION

In view of all the foregoing, Applicant submits that the claims pending in this application are patentable over the references of record and are in condition for allowance. Such action at an early date is earnestly solicited. **The Examiner is invited to call the undersigned representative to discuss any outstanding issues that may not have been adequately addressed in this response.**

The Assistant Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this transmittal and associated documents, or to credit any overpayment to **Deposit Account No. 501288** referencing the attorney docket number of this application.

Respectfully submitted,

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